



# DATA TRENDS, INC.

1259 RT. 46, PARSIPPANY, N. J. TEL 201-334-1515

25 June 1964

Mr. Ted Nelson  
Systems Engineer  
Interlocking Systems Company  
P. O. Box 1546  
Poughkeepsie, New York 12603

Dear Mr. Nelson:

Thank you for your interest in our Universal Buffer as seen in the April issue of "Data Systems Design". We are enclosing literature on our Local Universal Buffer and Remote Universal Buffer and would be happy to serve you in any way possible.

Very truly yours,

A handwritten signature in blue ink that reads "Donald W. Spreen".

Donald W. Spreen  
Director of Marketing

DWS:jag  
Enclosures

# DATA TRENDS, INC.

## A DATANNOUNCEMENT



### REMOTE UNIVERSAL BUFFER

The Remote Universal Buffer (RUB) is a message concentrating system that allows up to fifty MIMO real-time terminals to share a common telephone data channel to a distant computer. All MIMO terminals connected to a RUB may be operating simultaneously in a full duplex mode.

The RUB assembles messages from each MIMO terminal as they are written, and returns local copy to the appropriate terminals for verification. When the RUB has assembled a complete message, it transmits it to the computer with line identification information over the telephone data channel. The RUB also receives messages from the computer and routes them to the appropriate MIMO terminals.

In addition to its basic functions of message assembly and disassembly, the RUB also performs the tasks of code and format conversion, line identification, input-output timing, and communication line monitoring.

The telephone data channel interconnecting the RUB with the computer may have a capacity ranging from 1200 to 2400 bits per second, depending upon the expected traffic load. Communication is via the ASCII code, though other transmission codes are available. Error detection with retransmission of messages in error assures system reliability.

If the MIMO terminals are in the vicinity of the RUB, low cost local cabling may be used for interconnection. For MIMO terminals at great distances, standard telegraph data lines or Data-Phone dialup service may be used to connect the terminal to the buffer. In the event of communication line failure, the RUB will transfer a Line Fault message to the computer for diagnostic print out. In addition to MIMO terminals, other Remote Universal Buffers may also be connected to a RUB as long as the total concentration of MIMO's at any RUB does not exceed fifty.

In summary, the Remote Universal Buffer provides a flexible and powerful capability to organize MIMO real-time data communication systems into the most economical network.

FOR FURTHER INFORMATION, CONTACT. . . .

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### LOCAL UNIVERSAL BUFFER

The Local Universal Buffer (LUB) is a versatile message buffering system which may be used to interconnect up to fifty MIMO real-time terminals to a single input-output channel of a computer. The LUB can also perform certain pre-processing and housekeeping functions associated with MIMO communication, thus relieving the data processor of this load.

In particular, the LUB performs the functions of message assembly and disassembly, code and format conversion, line identification, input-output timing, and communication line monitoring. All MIMO terminals may be operating simultaneously on a full duplex basis with the LUB.

The LUB can connect to any free input-output channel of any computer, whether it be a real-time channel with program interrupt capabilities or not. If the computer channel is not capable of operating in real time, the buffering capabilities of the LUB give the system a real-time quality with respect to the MIMO terminals, since the attention of the computer is not required prior to writing in a message. Transfer of information between the computer and the LUB is in the computer code and is at a rate determined by the computer, up to a maximum rate of 330,000 characters per second.

If the MIMO terminals are in the vicinity of the LUB, low cost local cabling may be used for interconnection. For remote MIMO terminals, standard telegraph data lines or the Data-Phone dialup service may be used to connect the terminal to the buffer. In the event of communication line failure, the LUB will transfer a Line Fault message to the computer for diagnostic print out. In addition to MIMO terminals, one or more Remote Universal Buffers which act as remote MIMO concentrators may also be connected to the LUB, so long as the total number of MIMO terminals concentrated at the LUB does not exceed fifty.

In summary, the Local Universal Buffer provides a powerful and flexible capability to connect or extend existing data processing facilities into true on-line, real-time MIMO-equipped computer systems.

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